Regarding Broadband over Power Line (BPL):

As an Electrical Engineer, with experience in both the RF and power fields, I am convinced that BPL is a bad idea. The power line will act as much as an antenna as a transmission line, resulting in the radiation of a wide frequency range of noise, which will in turn interfere with communications and broadcast services from the AM broadcast band up into the VHF-TV range.

There is fundamentally no way to transmit a signal like BPL over a wire like a power transmission line without the single wire acting as an antenna, radiating much of the BPL signal. Preventing radiation requires preventing the power line from acting as an antenna—it needs to be a "transmission line" in the RF sense, not just in the 60Hz power sense. An RF transmission line uses another conductor in close proximity (fractions of an inch to a few inches, maximum) to contain the energy and prevent it from radiating. This second conductor could be another wire, separated by spacers ("ladder line" or "twin-lead"), a tube surrounding the wire (coaxial cable), or a ground plane (which could be the earth, but then the power line must be within a few inches of the ground—a definite safety hazard!). Any of these containment techniques negates the claimed cost benefits of BPL, as expensive retrofit of existing power lines is needed.

Further, the group proposing to operate BPL—the power distribution companies—have a poor track record maintaining their lines, even for the relatively undemanding 60Hz power frequency. Numerous and longstanding complaints about RF noise generated by loose hardware on power lines are documented in the FCC files, and have resulted in official warning to power distributors. Power companies are often uncooperative in solving their noise and interference problems, and I anticipate continued disregard for harmful interference on the part of power distributors if BPL is allowed.

Please do not allow deployment of broadband over power lines.

Thank you and regards,

Bob Wolbert
26K Engineering
26k@k6xx.com